



AMENDMENTS TO THE CLAIMS

The following listing of claims will replace all prior versions and listings of claims in the application.

LISTING OF CLAIMS

1. (Currently Amended) A method of forming a structural window panel for an airborne mobile platform, comprising:

using a plurality of non-fibrous, at least one metal sheets to form a frame structure, wherein the metal sheets defines an opening;

applying interleaving a plurality of layers of generally optically transparent, fiber pre-impregnated resin tape to between the metal sheets to substantially cover an entire surface portion of each one of the metal sheets and to fill the opening, the layers of pre-impregnated resin tape extending substantially to outer peripheral edges of the metal sheets;

heating the metal sheets and the fiber pre-impregnated resin tape layers as a unitary assembly within a tool such that the resin in each said pre-impregnated tape layer melts and substantially covers the metal sheets and fills the opening; and

once cured, the generally transparent, fiber pre-impregnated resin tape layers forms a see-through window portion in the frame-panel structure while covering substantially said metal sheets.

2. (Cancelled)

3. (Currently Amended) The method of claim 1, wherein the fiber pre-impregnated resin tape layers each comprises a plurality of fibers impressed into a resin tape.

4. (Original) The method of claim 3, wherein the fibers are comprised of fiberglass.

5. (Previously Presented) The method of claim 3, wherein the resin comprises a transparent aliphatic epoxy resin.

6. (Original) The method of claim 3, wherein the fibers have an index of refraction matching an index of refraction of the resin.

7. (Currently Amended) The method of claim 1, wherein the each said metal sheet comprises a plurality of metal foil strips.

8. (Cancelled)

9. (Currently Amended) The method of claim 1, wherein the each said metal sheet is comprised of aluminum.

10. (Currently Amended) The method of claim 1, wherein the each said metal sheet is comprised of titanium.

11. (Currently Amended) The method of claim 1, wherein each said the metal sheet forms an opening, said a plurality of openings each corresponding to a window.

12. (Original) The method of claim 1, wherein the fiber pre-impregnated resin tape has a width of approximately 1/8" (3.175 mm) to about 12" (304.8 mm).

13. (Currently Amended) A method of manufacturing a transparent window skin panel for an airborne mobile platform, comprising:

providing a tool;

providing a pre-impregnated resin tape comprised of a plurality of fibers impressed into a resin;

providing a non-fibrous, metal sheet-sheets having a plurality of spaced apart openings formed therein;

layering the pre-impregnated resin tape and the metal-structural sheets onto the tool and such that the metal-structural sheet and the pre-impregnated resin tape are aligned one atop the other, such that the pre-impregnated resin tape completely covers the openings and overlays a periphery substantially an entire outer surface of the metal sheet;

heating the tool, the metal structural sheet, and the pre-impregnated resin tape such that the resin flows to ~~at least partially cover~~ substantially cover an entirety of the metal sheet and the fibers, the resin and fibers being substantially transparent to form a plurality of see-through window portions in the skin panel in the spaced apart openings.

14. (Cancelled)

15. (Currently Amended) The method of manufacturing a transparent window skin panel of claim 13, wherein providing a pre-impregnated resin tape, providing a metal sheet, and layering the pre-impregnated resin tape and the metal sheet onto the tool comprises using a plurality of metal sheets and a plurality of layers of pre-impregnated resin tapes, and arranging the metal sheets and layers of pre-impregnated resin tapes in alternating layers.

16. (Cancelled)

17. (Currently Amended) The method of manufacturing a transparent window skin panel of claim 13–16, wherein applying the pre-impregnated resin tape within any given layer comprises applying sandwiching a plurality of fiber pre-impregnated resin tapes—tape layers one adjacent another to fully cover the metal sheets and to fully fill the openings in the metal sheet—sheets.

18. (Original) The method of manufacturing a transparent window skin panel of claim 13, wherein the fibers have an index of refraction matching an index of refraction of the resin.

19. (Original) The method of manufacturing a transparent window skin panel of claim 13, wherein the resin comprises a transparent aliphatic epoxy.

20. (Previously Presented) The method of manufacturing a transparent window skin panel of claim 13, wherein the metal sheet is comprised of aluminum.

21. (Previously Presented) The method of manufacturing a transparent window skin panel of claim 13, wherein the metal sheet is comprised of titanium.

22. (Original) The method of manufacturing a transparent window skin panel of claim 13, wherein the fibers are comprised of fiberglass.

23. (Original) The method of manufacturing a transparent window skin panel of claim 13, wherein the resin comprises a transparent aliphatic epoxy resin.

24. (Original) The method of manufacturing a transparent window skin panel of claim 13, wherein the fibers have an index of refraction matching an index of refraction of the resin.

25. (Original) The method of manufacturing a transparent window skin panel of claim 13, wherein the metal sheet comprises a plurality of metal foil strips.

26. (Cancelled)

27. (Original) The method of manufacturing a transparent window skin panel of claim 13, wherein the metal sheet is comprised of aluminum.

28. (Original) The method of manufacturing a transparent window skin panel of claim 13, wherein the metal sheet is comprised of titanium.

29. (Original) The method of manufacturing a transparent window skin panel of claim 13, wherein the pre-impregnated resin tape has a width of approximately 1/8" (3.175 mm) to about 12" (304.8 mm).

30. (Currently Amended) The method of manufacturing a transparent window skin panel of claim 13, further comprising placing a caul plate atop the metal sheet, the pre-impregnated resin tape, and the tool.

31. (Currently Amended) The method of manufacturing a transparent window skin panel of claim 30, further comprising placing the caul plate, the metal sheet, the pre-impregnated resin tape, and the tool into a vacuum bag and removing the air therein.

32. (Currently Amended) The method of manufacturing a transparent window skin panel of claim 13, wherein heating the tool, the metal sheet, and the pre-impregnated resin tape comprises using an autoclave.

33. (Currently Amended) The method of manufacturing a transparent window skin panel of claim 29, wherein the autoclave heats the tool, the metal sheet, and the pre-impregnated resin tape to approximately 350 degrees Fahrenheit under approximately 100 to 200 psi of pressure.